What is claimed is:

1. A method of chemopreventing cancer by administering to a mammal a cancer chemopreventive composition of matter, comprising an effective amount of at least one alphapyrone compound having the following structural formula:

in which R1 is a hydrogen atom or an alkoxy radical having 1 to 4 carbon atoms, R2 is a hydrogen atom or a hydroxyl group, and R3 is an alkyl radical having from 1 to 4 carbon atoms or a styryl or phenethyl radical optionally substituted by one or two methylenedioxy radicals or one or two hydroxyl groups and/or one or two alkoxy radicals having from 1 to 4 carbon atoms, with the proviso that, when R2 is a hydroxyl group, then R3 is necessarily an unsubstituted phenethyl radical, with the proviso that when R3 is an alkyl radical having 1 to 4 carbon atoms, then and R2 cannot both be hydrogen, physiologically acceptable carrier medium for the purpose of preventing cancer sensitive to the formula.

- 2. The method of claim 1, comprising a pill.
- 3. The method of claim 1, comprising a liquid.
- 4. The method of claim 1, comprising a gum.
- 5. The method of claim 1, comprising a transdermal patch.